

REMARKS

In the Office Action mailed December 20, 2005, the Examiner rejected claims 1-6 and 32-35 under 35 U.S.C. § 103(a). In the Advisory Action dated March 14, 2006, the Examiner stated that the Response to the Office Action mailed December 20, 2005 did not place the application in condition for allowance. On March 23, 2006, Applicants filed a notice of appeal. By filing this Request for Continued Examination, Applicants withdraw the application from appeal to reopen prosecution of the application. (See, MPEP § 1215.01.)

Applicants have amended claims 1 and 3 to clarify the location of layers within an RF semiconductor device. Additionally, Applicants have amended claims 33 and 35 to clarify that a silicon layer of the RF semiconductor device includes RF components. Applicants have also amended claim 2 to correct a typographical error. No new matter has been added. Applicants submit that claims 1-6 and 32-35 are in condition for allowance and respectfully request notice to this effect.

The Examiner rejected claims 1-6 and 32-35 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,376,579 ("Annamalai") in view of Applicants' Admitted Prior Art ("AAPA") and U.S. Patent No. 4,905,075 ("Temple"). In claim 1, Applicants recite an RF semiconductor device. The RF semiconductor device includes three layers: a high resistivity polysilicon handle wafer, a buried oxide layer located directly on the polysilicon handle wafer, and a silicon layer located directly on the buried oxide layer. Similarly, in claim 3, Applicants recite an RF semiconductor device that includes three layers. However, in claim 3, the "polysilicon handle wafer" of claim 1 is replaced with a polycrystalline layer.

In contrast to the claimed invention, Annamalia teaches a buried oxide layer that is not located directly on the polysilicon handle wafer. Instead, Annamalia teaches a diamond layer (4) and an active silicon layer (3) located between the buried oxide layer (2) and the polysilicon handle wafer (5) (before the buried oxide layer is removed). (See, e.g., Annamalia, Fig. 3.) Annamalia does not suggest that the buried oxide layer is located directly on the polysilicon handle wafer because Annamalia is concerned with producing Silicon-On-Diamond structures, which are designed to have the diamond layer acting as an electrical insulator between the active silicon layer and the substrate. (See, e.g., Annamalia, col. 3, lines 12-20.) Moreover, to complete the Silicon-On-Diamond structure, Annamalia removes the buried oxide layer. (See, e.g., Annamalia, col. 4, lines 40-47.) Thus, Annamalia does not show or suggest a device having a buried oxide layer that is located directly on a polysilicon handle wafer or a polycrystalline layer.

Both AAPA and Temple fail to overcome the deficiencies in Annamalia. AAPA was cited for the teaching of using a high resistivity substrate to form RF devices. (Office Action mailed July 26, 2005, page 2). Temple was cited for the teaching of using a polysilicon wafer or handle having a resistivity of greater than 10^6 ohm-cm to provide a structure that can withstand mechanical shock. (Office Action mailed December 20, 2005, page 2.) Applicants respectfully disagree with the Examiner's interpretation of the teachings of AAPA. However, the Examiner's cited teachings of AAPA and Temple do not show or suggest a buried oxide layer that is located directly on the polysilicon handle wafer or polycrystalline layer.

Because none of Annamalia, AAPA, and Temple shows or suggests a buried oxide layer that is located directly on the polysilicon handle wafer or polycrystalline layer, the combination of Annamalia, AAPA, and Temple does not show or suggest the claimed devices. Thus, Applicants

submit that claims 1 and 3 are not obvious in light of the combination of Annamalia, AAPA, and Temple.

Claims 2, 32, and 33 depend from claim 1. Claim 4-6, 34, and 35 depend from claim 3. Accordingly, Applicants also submit that claims 2, 4-6, and 32-35 are not obvious in light of the combination of Annamalia, AAPA, and Temple for at least the reasons described above with reference to claims 1 and 3.

In light of the above, Applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 103(a).

CONCLUSION

In light of the above amendments and remarks, Applicants submit that the present application is in condition for allowance and respectfully request notice to this effect. The Examiner is requested to contact Applicants' representative below if any questions arise or she may be of assistance to the Examiner.

Respectfully submitted,

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